

REMARKS

This amendment is being filed in response to the Office Action dated February 10, 2011. Various claims are amended as shown. No new matter has been added. Claims 6, 12, and 32 were previously canceled without prejudice. With this filing, claims 1-5, 7-11, 13-31, and 33-35 are pending in the application.

I. Discussion of the claims and cited references

The present Office Action rejected claims 1-5, 7-9, 11, 13-16, 17, 19, 20-22, 24-27, 28-31, and 33-35 under 35 U.S.C. § 102(e) as allegedly being anticipated by Rana (U.S. Patent No. 7,760,737). Claims 10 and 18 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rana in view of Basso (U.S. Patent No. 7,065,086).

It is noted that while the present Office Action indicates that claim 23 is rejected, no grounds of rejection and/or reasoning in support of a rejection of claim 23 has been set forth in the present Office Action. If indeed the present Office Action intended to reject claim 23, it is kindly requested that full details of the rejection be set forth in the next communication if a rejection of claim 23 is asserted/maintained.

For the reasons set forth below, the rejections of the claims are respectfully traversed. It is therefore kindly requested that the Examiner reconsider and withdraw the rejections.

A. Independent claim 1

Independent claim 1 as presented herein recites, *inter alia*, the following (emphasis ours):

“...**determining**, by said network device, ***if said received packet fragment is a head fragment or a non-head fragment*** of said packet;

if the received packet fragment is determined to be the head fragment of said packet:

generating, by said network device, ***a session*** associated with the head fragment;

processing, by said network device, the head fragment to determine a destination address for said head fragment, ***said generated session being created to store***

forwarding information and having a period of time to store said forwarding information, including said determined destination address, for said packet or a fragment thereof; and

updating, by said network device at least one non-head fragment of said packet to *write said destination address, which is obtained from said generated session, into a destination address field of said at least one non-head fragment of said packet* to enable said at least one non-head fragment to be forwarded to same said destination address as said head fragment; and

forwarding said head fragment and said at least one non-head fragment to same said destination address for reassembly back into said packet at said destination address.”

Support for the above recitations of amended claim 1 can be found in at least page 8, lines 24-25; page 11, lines 25-25 and claim 6 as originally filed; page 8, lines 13-16; page 13, lines 17-18; and elsewhere throughout the present application. It is respectfully submitted that Rana does not teach at least the above recitations of claim 1.

Various recitations above of claim 1 will be discussed in turn below:

(1) “determining, by said network device, if said received packet fragment is a head fragment or a non-head fragment of said packet”

The present Office Action cites column 4, lines 10-13 of Rana as allegedly teaching this recitation of claim 1. This cited passage of Rana states that “In addition to associating a session id with the data packet, PDU assembler 26 also *extracts fragment information from the header of the data packet* and *determines whether the data packet is a fragment*” (emphasis ours).

Rather than teaching the recitations of claim 1, the above cited/quoted passage of Rana teaches that information “from the header of the data packet” is extracted in order to determine “whether the data packet is a fragment.” Stated in another way, Rana is completely silent with respect to determining whether a “received packet fragment is a head fragment or a non-head fragment of said packet” as recited in claim 1—rather, Rana simply determines whether or not a data packet is a *fragment*—Rana does not make any distinctions/determinations between types of fragments, such as if his fragment is a head fragment or a non-head fragment, as set forth in claim 1.

(2) “generating a session...said generated session being created to store forwarding information and having a period of time to store said forwarding information, including said determined destination address”

The present Office Action cites column 4, lines 17-19 and column 6, lines 62-65 of Rana as allegedly teaching the “session” recited in previously presented claim 1. In particular, the present Office Action relies upon the “session id” of Rana.

It is respectfully submitted that Rana does not teach the “session” of claim 1 as previously presented and as amended herein.

Column 3, lines 56-64 of Rana provides further details regarding his “session” and “session id,” and is reproduced below (emphasis ours):

“A session, or traffic flow, is comprised of all the data packets that form a unique session across the network, for example, a session could be composed of a TCP/IP session for email or web browsing, a UDP session for streaming video, or any other complete traffic flow across the network. The queue engine assigns a session id to the first data packet received for a new session, and each subsequent packet in the session is associated with that session id”

Thus, it is abundantly clear from the above-quoted passage that Rana’s “session” is a “traffic flow” of the data packets across the network. In comparison to Rana, claim 1 as amended herein recites “said generated session being *created to store forwarding information...*” Rana is completely silent with respect to his session being created to “store forwarding information”—his session is just a traffic flow of packets and was not specifically created for the purpose of storing forwarding information, and his “session id” is created to identify the particular traffic flow of packets.

(3) “updating...to write said destination address, which is obtained from said generated session, into a destination address field of said at least one non-head fragment of said packet”

Page 3 of the present Office Action cites column 6, lines 37-45 as allegedly teaching “applying...said destination address which is obtained from said generated session to at

least one non-head fragment of said packet” of previously presented claim 1. More particularly, the present Office Action asserts that this passage of Rana teaches “assign unique id (destination address, DIP) to fragments or stream.” Thus, it appears that the present Office Action is interpreting Rana’s “unique id” as being one and the same as a “destination address.”

It is respectfully submitted that the interpretation of Rana by the present Office Action to reject claim 1 is in error. Rana’s “unique id” is not a “destination address.”

Claim 1 is amended herein so as to provide still further distinction over Rana and in particular now recites “updating...to *write said destination address*, which is obtained from said generated session, *into a destination address field of said at least one non-head fragment of said packet*” (emphasis ours).

Column 6, lines 37-45 of Rana (relied upon by the present Office Action), as well as column 4, lines 1-9 of Rana, are reproduced below, (emphasis ours):

“[The] *session id is a location in session CAM 38 which is associated with the unique signature used to identify each session*. The unique signature is comprised of various fields extracted from the header by PDU assembler 26. For example, a session could be identified and assigned a session id based upon the source address, destination address, source port, destination port, protocol fields, and any other field or combination of fields from the header of the data packet which *form a unique identifier* based on the properties of the session...FIG. 3a shows an example of the fields that may be extracted from the headers of each PDU by PDU assembler 26 from FIG. 1. FIG. 3a shows such fields as source address (SIP) and port (SP), destination address (DIP) and port (DP) and protocol (prot) extracted as examples of fields that can be used to *assign a unique identifier to the associated data stream*.”

From the above-quoted and other passages of Rana, it is abundantly clear that what Rana does is to assign each of his streams with a “session id” that operates as a “unique identifier” of the session. As explained by Rana above, the “unique identifier” is assigned from or otherwise obtained or computed from certain fields in the data packet, such as source address, destination address, etc.

The passages of Rana relied upon by the present Office Action merely explain that the unique identifier (the session id) is computed from certain fields of the data packet and

assigned to the stream and stored in a . It is respectfully submitted that this teaching of Rana is different than what is recited in claim 1. More particularly, Rana computes/obtains a unique id from a destination address or other field of the data packet, and then assigns the unique id to the stream that the packet belongs to, whereas in comparison claim 1 recites “write said destination address...into a destination address field of said at least one non-head fragment.” A graphical representation of this difference is that Rana performs: extracting destination address from destination address field of a packet→obtaining unique/session id from extracted destination address→writing unique/session id into a content addressable memory (CAM) 38. A non-limiting example embodiment corresponding to claim 1 can be graphically represented as: obtain destination address from session→write obtained destination address into destination address field of fragment.

It is respectfully submitted that Rana cannot reasonably and logically be interpreted to be the same as the “write said destination address...into a destination address field of said at least one non-head fragment” recited in claim 1. Such an interpretation would require Rana to extract the destination address from the destination address field of the fragment, compute the unique/session id from the extracted destination address, and then write the original destination address back into the destination address field into the fragment. This interpretation would be non-sensical because Rana does not and would have no reason to be overwriting a destination address with itself in a fragment--Rana's primary purpose is to determine a session/unique id to write into the CAM 38, and his unique/session id is not a destination address.

(4) “forwarding said head fragment and said at least one non-head fragment to same said destination address for reassembly back into said packet at said destination address”

Rana does not forward his fragments to the same destination address for reassembly at the destination address. As clearly shown in Figure 1, Figures 4A-4B, and described in column 4, lines 35-55 of Rana, Rana instead provides his engine 10 with a fragment reassembly unit 28. The fragment reassembly unit 28 operates to use a reassembly algorithm of Figures 4A-4B to reassemble the fragments *prior to* forwarding to the destination address written

into the destination address field of the packet. The fragment reassembly unit 28 of Rana is in the same device/engine 10 that processed his fragments, and is **not** the destination address indicated in the destination address field of his fragments.

Accordingly, since Rana reassembles his fragments at the fragment reassembly unit 28, rather than at the destination address, Rana does not teach the recitations in claim 1 of “forwarding said head fragment and said at least one non-head fragment to same said destination address for reassembly back into said packet at said destination address.”

Furthermore, claim 1 recites “...to enable said at least one non-head fragment to be forwarded to same said destination address as said head fragment.” Rana further does not teach these recitations, since he reassembles his fragments at his fragment reassembly unit 28. The output from Rana’s engine 10 (having his fragment reassembly unit 28) are longer “fragments” because the fragments have been reassembled back into a packet--therefore and in contrast to claim 1, Rana would be forwarding an assembled packet, rather than fragments to be assembled back into the packet, to the destination address.

Accordingly, in view of at least the foregoing reasons that Rana does not teach the various recitations of claim 1, it is respectfully submitted that claim 1 is allowable over Rana.

B. Other independent claims

The other independent claims 9, 11, 13, 17, 20, 28, and 33 as presented herein contain some recitations generally similar to some of the recitations of claim 1 that are not taught by Rana. For example, at least the following recitations (emphasis ours) are not taught by Rana, as previously alluded to above pertaining to the session and/or write or writing the destination address into the destination address field:

- In claim 9: “***said generated session being created to store forwarding information*** and having a period of time to store said forwarding information, including the determined destination address, for the packet or a fragment thereof” and “***...write the determined destination address...into a destination address field*** of the any corresponding non-head fragment of said packet.”

- In claim 11: “said generated session having a period of time to store forwarding information for the packet or a fragment thereof” and “...*overwriting a destination address field* of said any corresponding non-head fragment *with said obtained destination address*.”

- In claim 13: “*said generated session being created to store forwarding information* and having a period of time to store said forwarding information, including said determined destination address, for said packet or a fragment thereof” and “...*write the destination address...into a destination address field* of said any corresponding non-head fragment of said packet.”

- In claim 17: “*said generated session being created to store forwarding information* and having a period of time to store said forwarding information, including said determined destination address, for said packet or a fragment thereof” and “...*write the destination address...into a destination address field* of said any corresponding non-head fragment of said packet.”

- In claim 20: “*said generated session being created to store forwarding information* and having a period of time to store said forwarding information, including a destination address, for said packet or a fragment thereof” and “...*write said destination address* which is obtained from said generated session *into respective destination address fields* of said non-head fragments.”

- In claim 28: “*said generated session being created to store forwarding information* and having a period of time to store said forwarding information, including storage of the determined destination address, for said packet or a fragment thereof, and...to *write the stored destination address...into a destination address field* of said any corresponding non-head fragment of said packet.”

- In claim 33: “an *overwrite of a destination address field* of said any corresponding non-head fragment *with said stored destination address*.”

II. Conclusion

If there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 407-1574.

The Director is authorized to charge any additional fees due by way of this response, or credit any overpayment, to our Deposit Account No. 500393.

All of the claims remaining in the application are believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited

Respectfully submitted,
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